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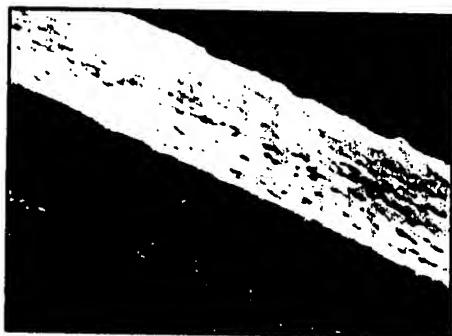
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*FIG. 1A*



— 1 $\mu$ m  
3.5KV X33,000 8mm

*FIG. 1B*



— 1 $\mu$ m  
414619 3.5KV X33,000 24mm

*FIG. 1C*



— 1 $\mu$ m  
3.5KV X18,000 7mm

*FIG. 1D*



— 1 $\mu$ m  
3.0KV X45,000 15mm

*FIG. 1E*



— 1 $\mu$ m  
0020 3.5KV X4,500 15mm

*FIG. 1F*



— 1 $\mu$ m  
0014 3.5KV X4,300 15mm

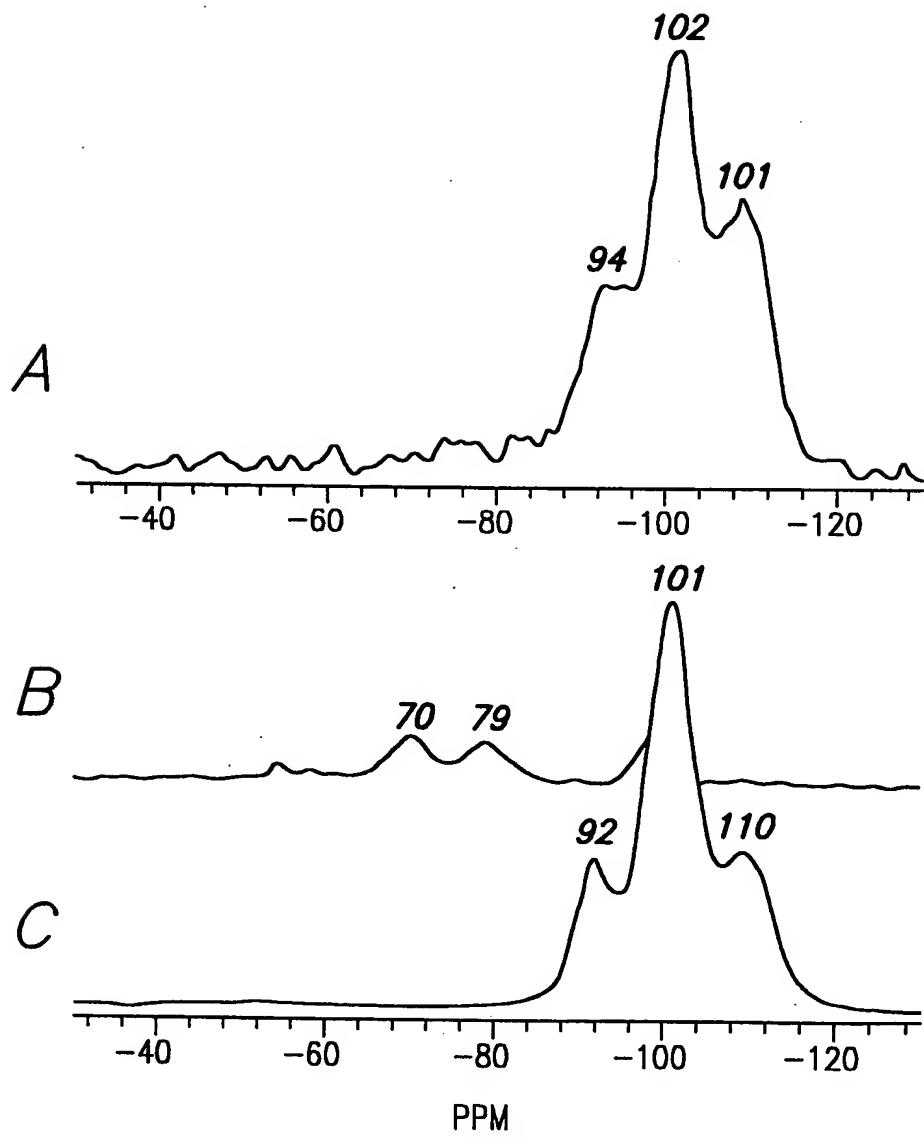


FIG. 2

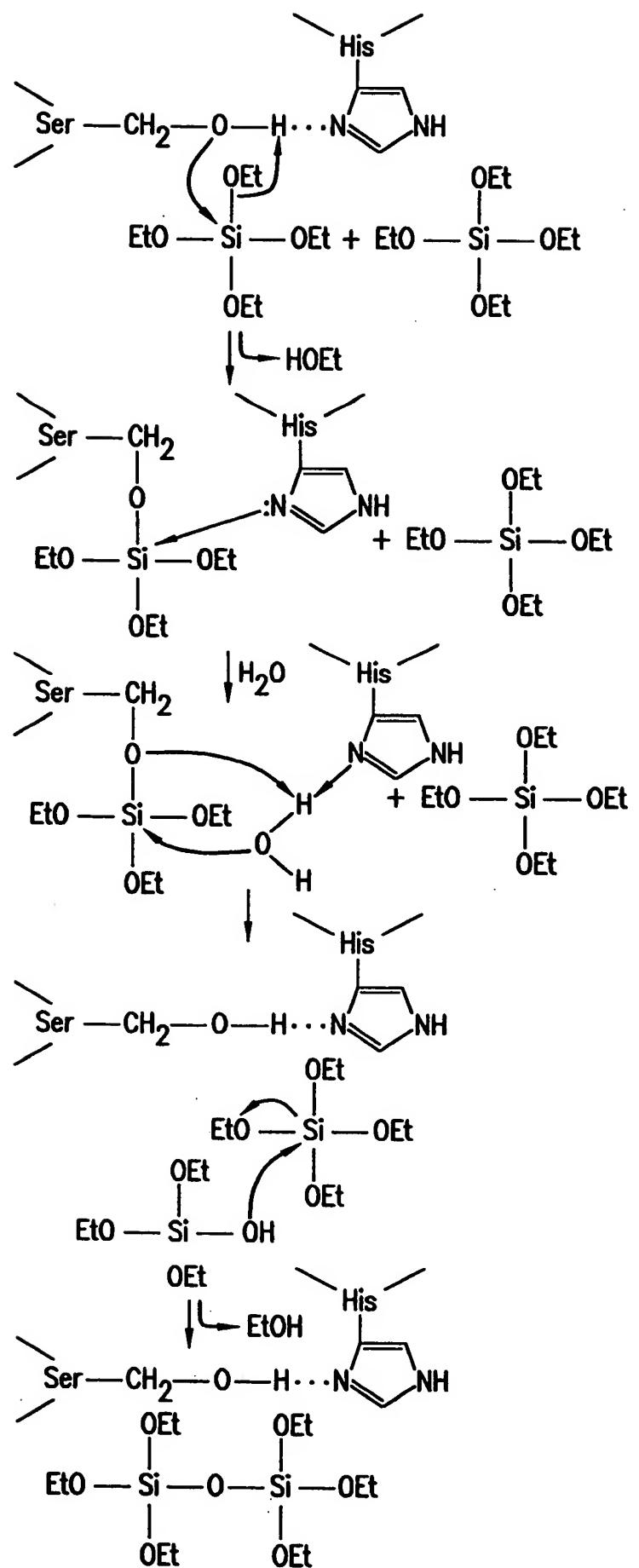
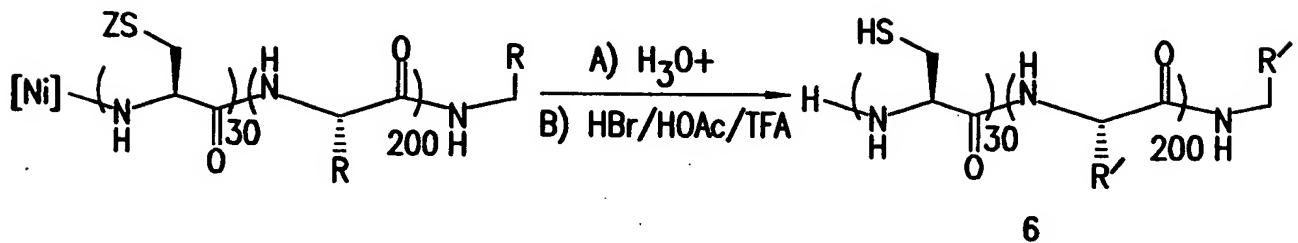
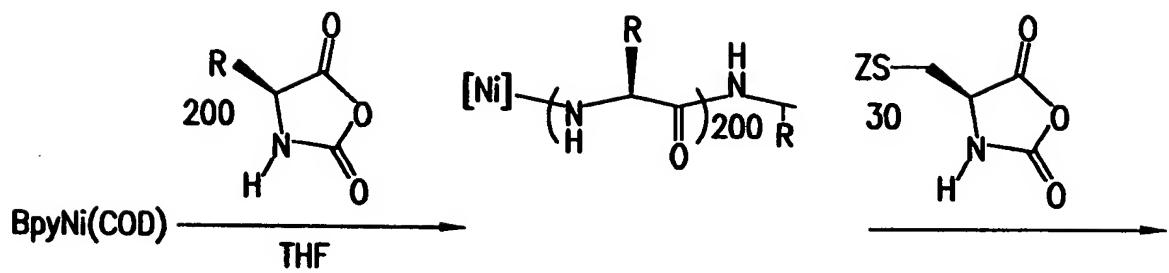


FIG. 3



$R = -(\text{CH}_2)_4\text{NHC(O)OCH}_2\text{C}_6\text{H}_5$

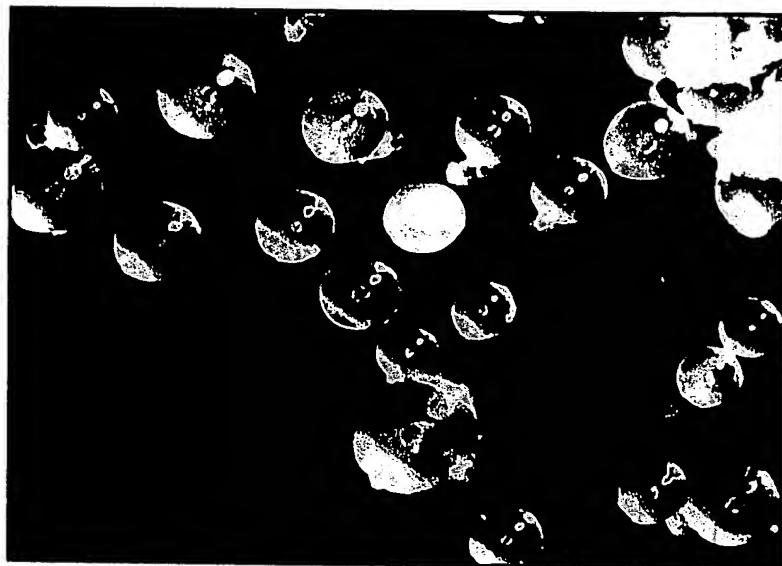
$[\text{Ni}] = \text{INITIATOR ENDCROUP}$

$R' = -(\text{CH}_2)_4\text{NH}_3^+ \text{BR}$

$Z = -\text{C(O)OCH}_2\text{C}_6\text{H}_5$

FIG. 4

*FIG. 5A*



— 200 $\mu$ m

*FIG. 5B*



— 1 $\mu$ m  
3.0KV X6,500 14mm

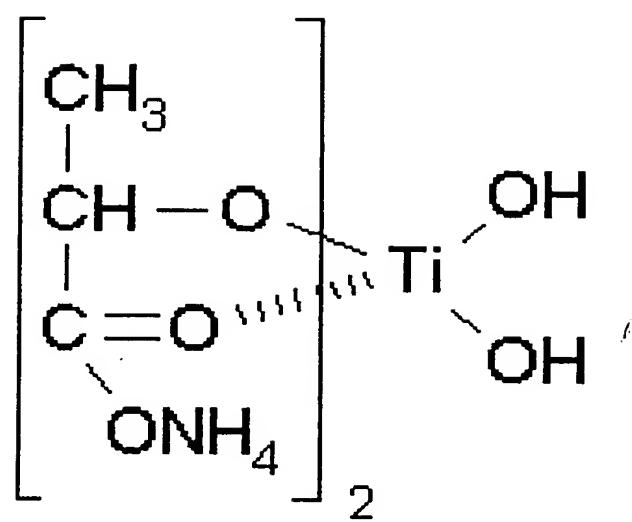
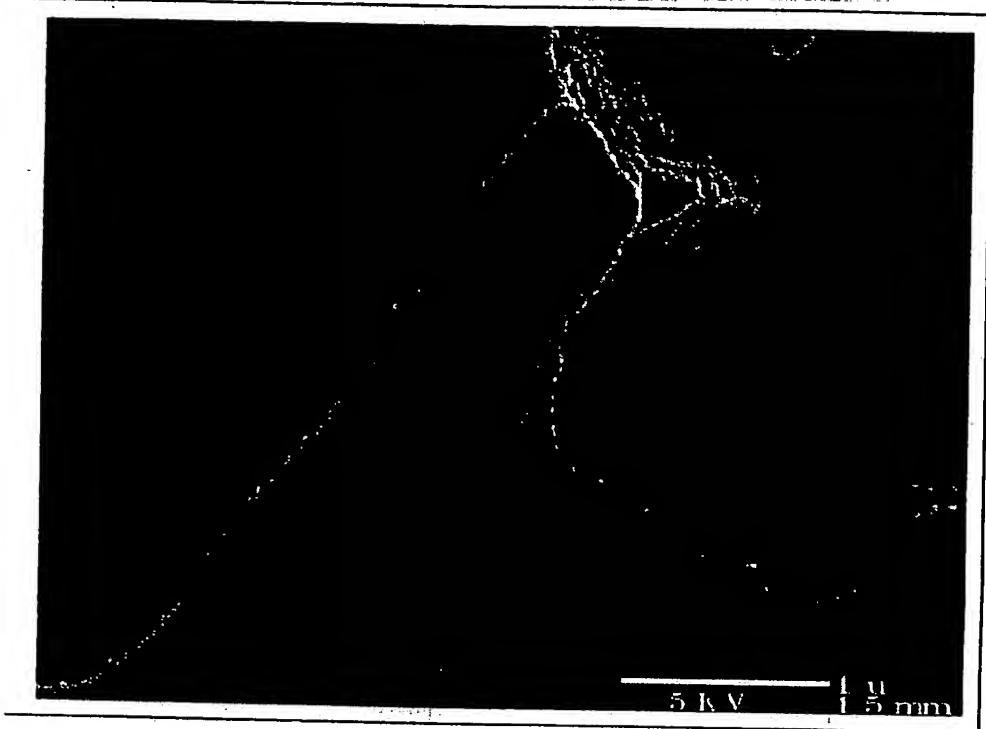
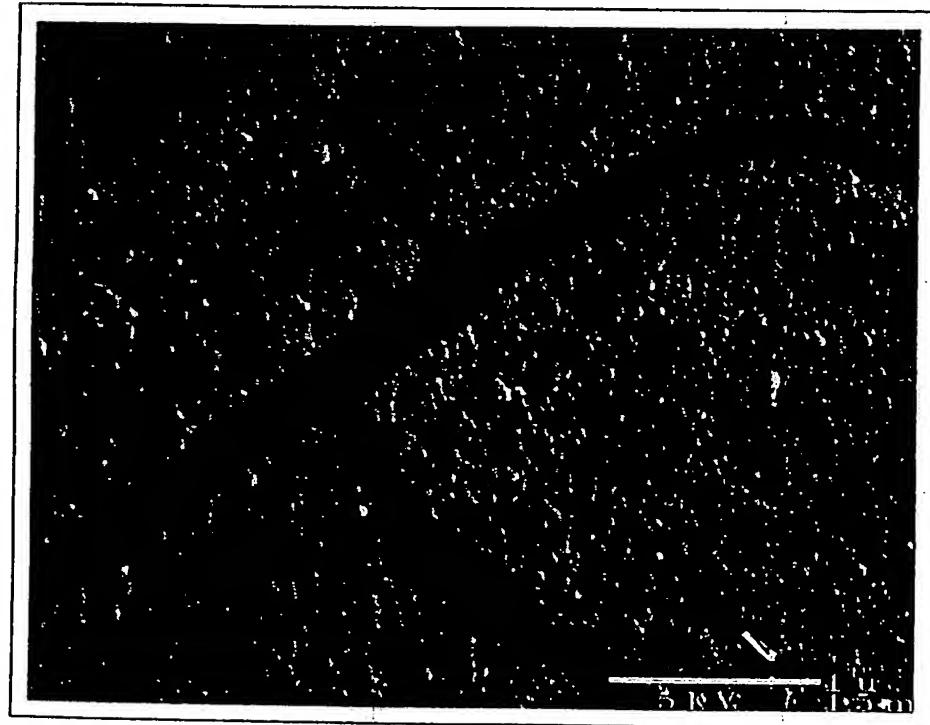


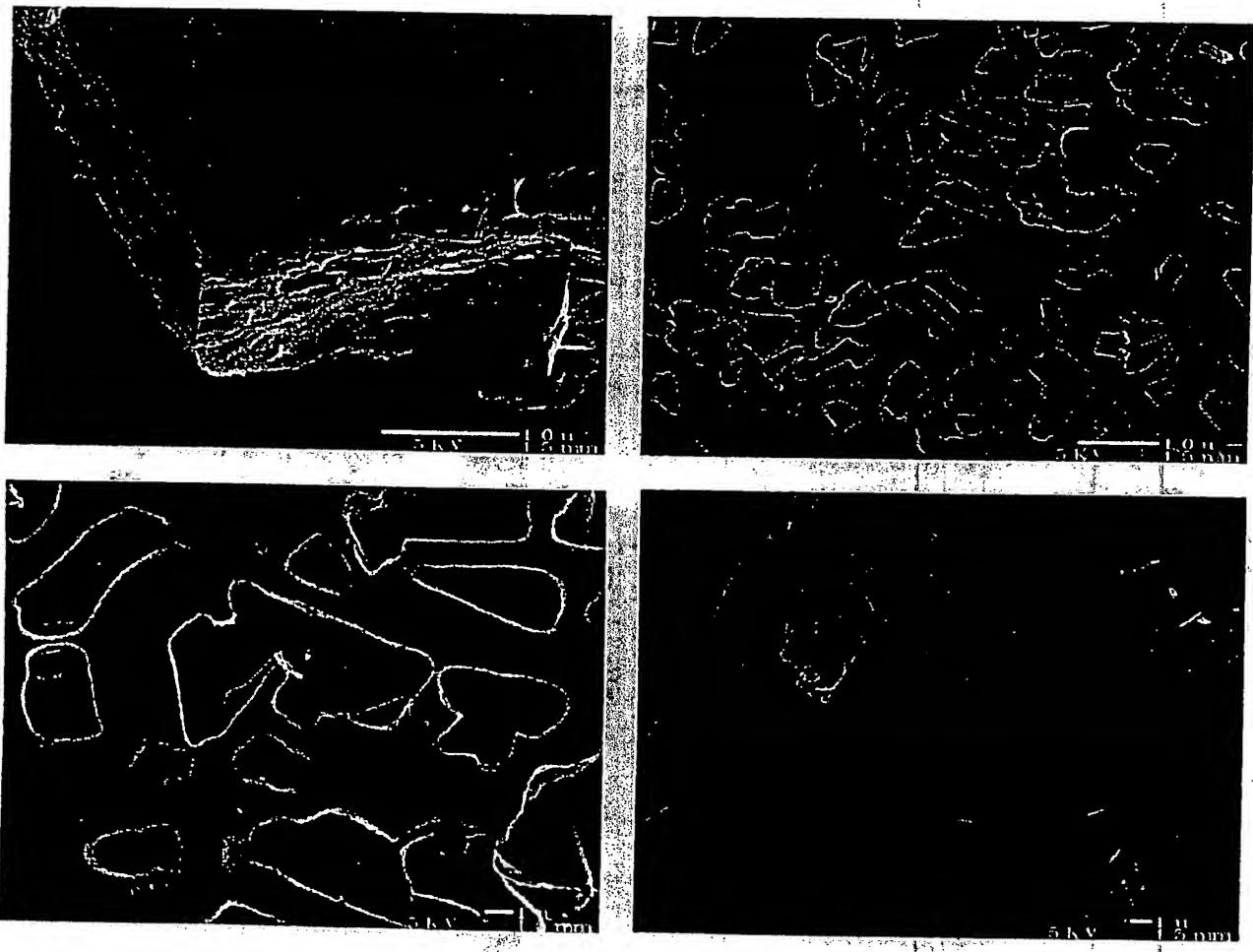
FIG. 6



*FIG. 7A*

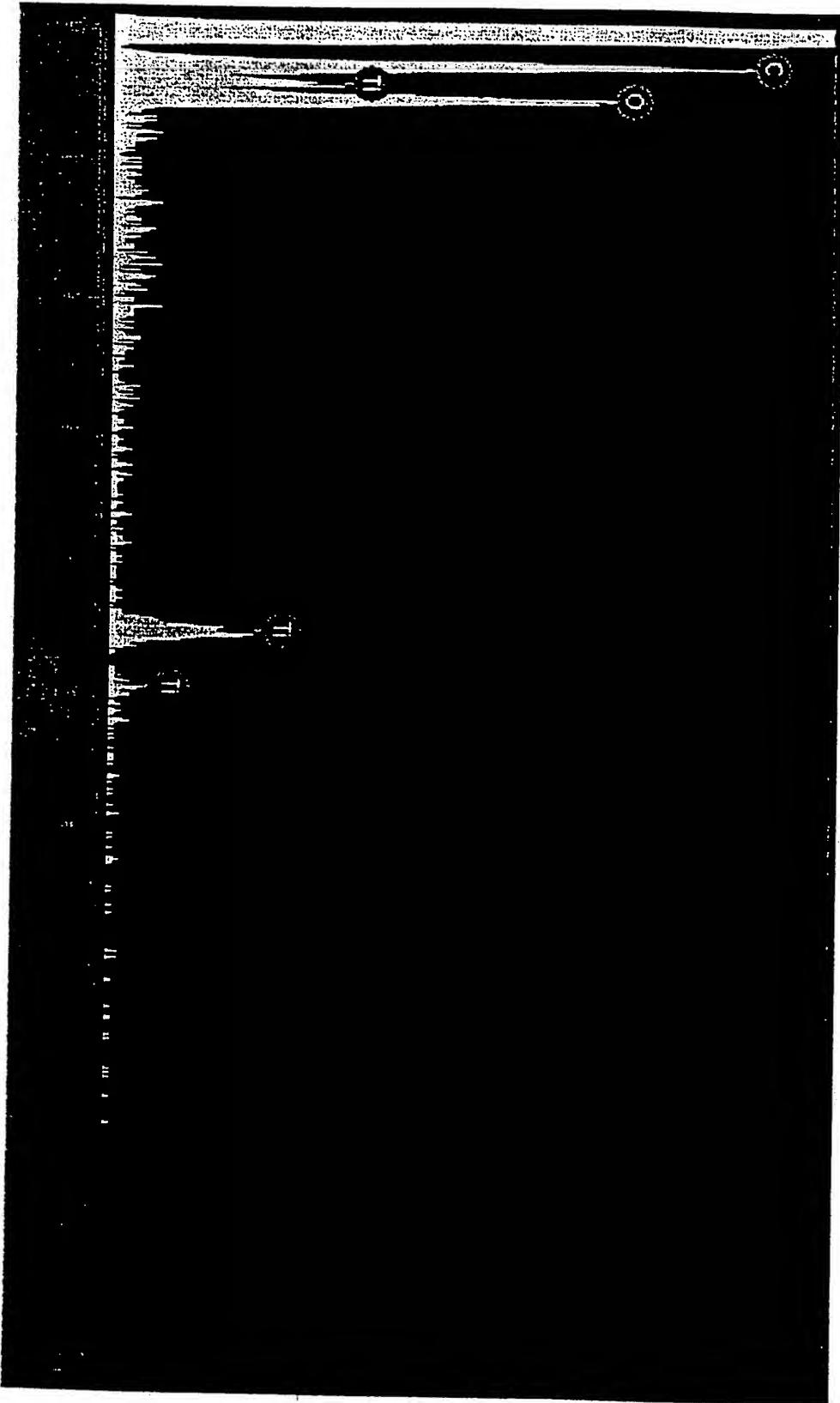


*FIG. 7B*



**FIG. 8**

*FIG. 9*



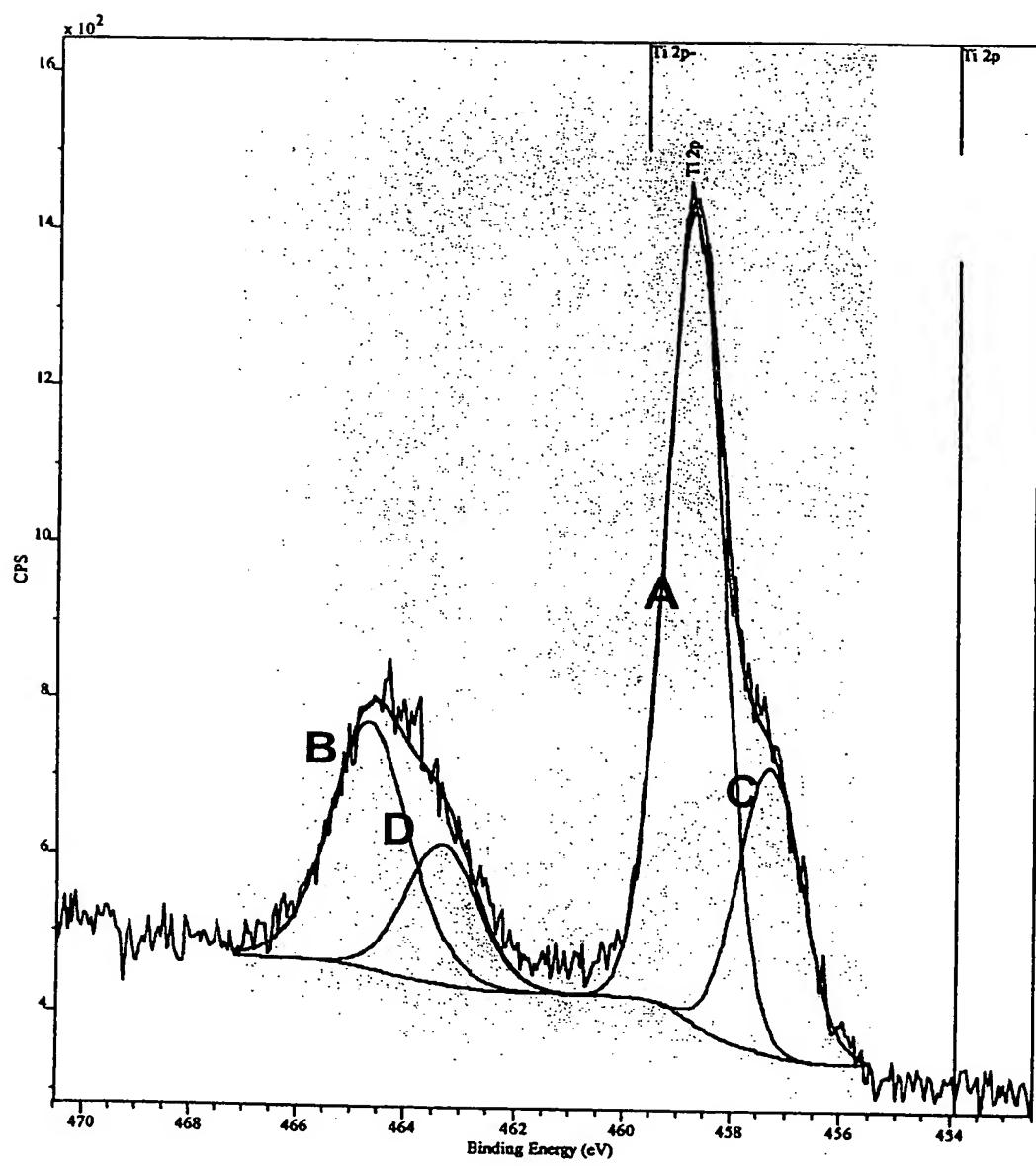


FIG. 10

Excited at 280 nm

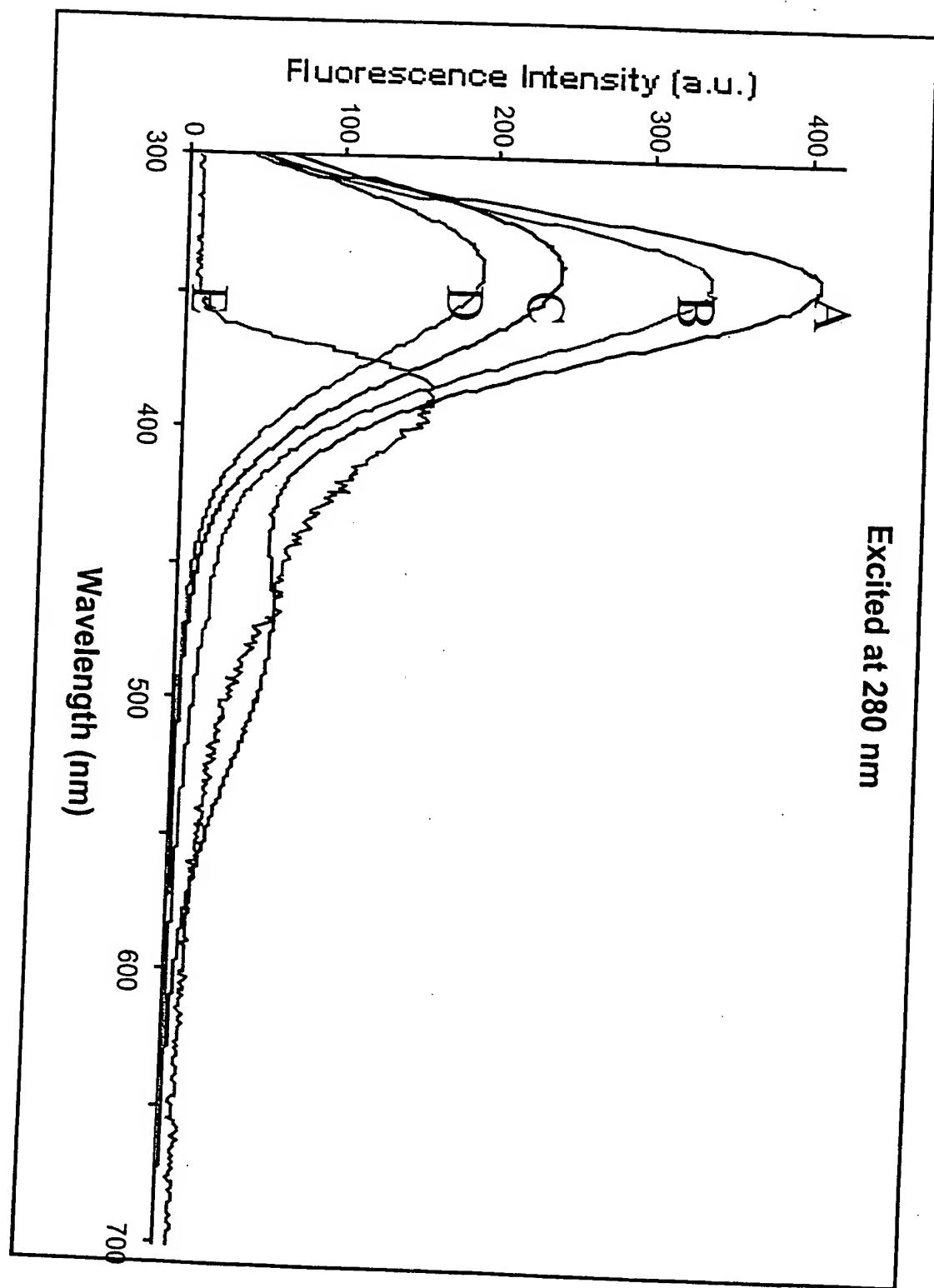


FIG. 11

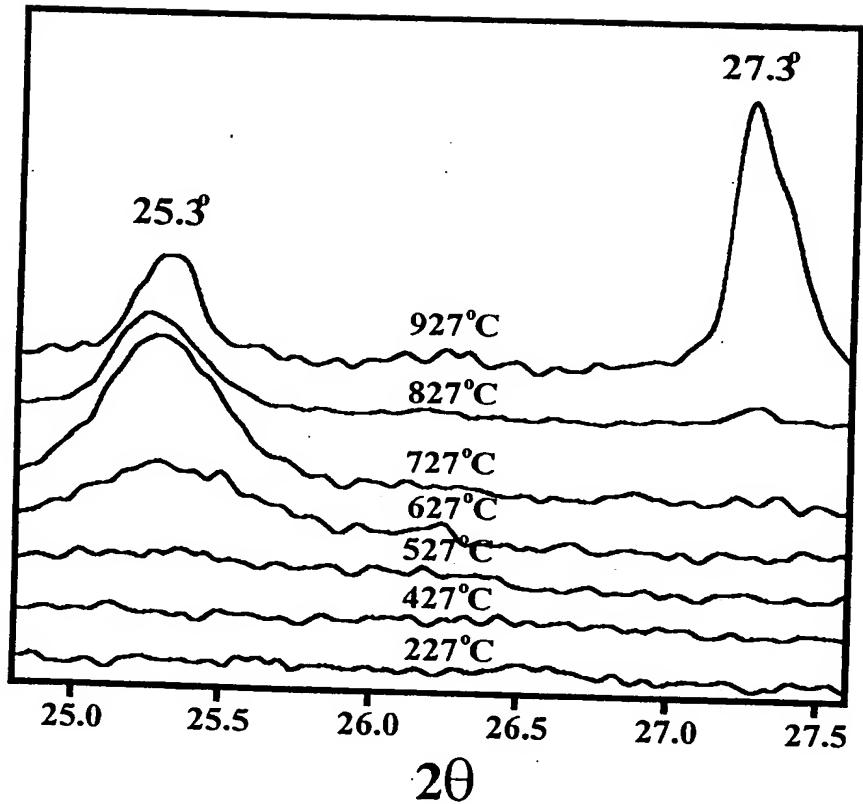


FIG. 12

Catalyst	Temp	Polymorph	Av. Crystal Size (nm)
Silicatein	400	Anatase	2.0
	600	Anatase	9.1
	800	Anatase	19.0
	850	3% Anatase 97% Rutile	54.2
Base	600	Anatase	13.5
	700	98% Anatase 2% Rutile	22.6
	800	40% Anatase 60% Rutile	34.1 42.0
	850	Rutile	53.1
None	600	Anatase	4.5
	800	10% Anatase 90% Rutile	32.0
	850	Rutile	44.8

*FIG. 13*